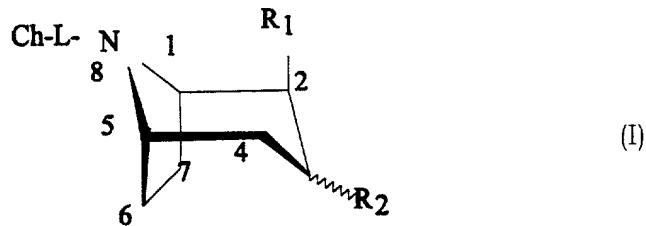


We claim

1. A radiopharmaceutical compound which is capable of complexing with ^{99m}Tc , said compound having the following structural formula:



wherein R₁ is α or β and is selected from COOR^a, COR^a, and CON(CH₃)OR^a;

R₂ is α or β and is selected from the group consisting of C₆H₄X, C₆H₃XY, C₁₀H₇X, and C₁₀H₆XY;

R^a is C₁ - C₅ alkyl;

X and Y are independently selected from the group consisting of R^a, H, Br, Cl, I, F, OH, and OCH₃;

the bond between C₂ and C₃ is a single bond or a double bond;

L is -(CH₂)_n where n is an integer from 1 to 6, or -(CH₂)_n - (aryl, arylalkyl, ethenyl or ethynyl) - (CH₂)_m - where m and n are integers and the sum of

n plus m is an integer from 1 to 6; and

Ch is a tridentate or tetridentate chelating ligand that forms a neutral complex with technetium or rhenium.

2. A compound according to claim 1 labeled with a radionuclide that is complexed with the chelating ligand.
3. A compound according to claim 2, wherein the radionuclide is ^{99m}Tc .
4. A compound according to claim 2, wherein the radionuclide is rhenium.
5. A compound according to claim 1, wherein the tropane analog has a 3α -group.
6. A compound according to claim 1, wherein the tropane analog has a 3β -group.
7. A compound according to claim 1, wherein the chelating ligand comprises a bisamido-bisthiol group, a monoamide, monoamino-bisthiol group or a bisamino-bisthiol group covalently attached to linker L.
8. A compound according to claim 1, wherein the chelating ligand is a monoaminomonoamide bisthiol.

9. A compound according to claim 1, wherein the chelating ligand is *N*-(2-((2-((triphenylmethyl)thio)-ethyl)amino)acetyl)-*S*-(triphenylmethyl)-2-aminoethanethiol.

10. A compound according to claim 1, wherein the tropane ligand is selected from the group consisting of:

- a. 2 β -Methoxycarbonyl-3 β -(4-fluorophenyl)-tropane;
- b. 2 β -Methoxycarbonyl-3 β -(3,4-dichlorophenyl)-tropane;
- c. (S)-(+)-2 β -carbomethoxy-3 α -(bis(4-fluorophenyl)methoxy)tropane;
- d. (1*R*)-2-(Methoxycarbonyl)-3-[[[trifluoromethyl]sulfonyl]oxy]trop-2-ene;
- e. (1*R*)-2-methoxycarbonyl-3-(3,4-dichlorophenyl)-8-azabicyclo[3.2.1]oct-2-ene;
- f. (1*R*)-2 β -methoxycarbonyl-3 β -(3,4-dichlorophenyl)-8-azabicyclo[3.2.1]octane;
- g. (1*R*)-2 β -methoxycarbonyl-3 α -(3,4-dichlorophenyl)-8-azabicyclo[3.2.1]octane;
- h. (1*R*)-2 β -methoxycarbonyl-3 β -(4-fluorophenyl)-8-azabicyclo[3.2.1]octane;
- i. (1*R*)-2 β -methoxycarbonyl-3 α -(4-fluorophenyl)-8-azabicyclo[3.2.1]octane;
- j. 2 β -Carboxy-3 β -(4-fluorophenyl)tropane;
- k. 2 β -Carboxy-3 β -(3,4-dichlorophenyl)tropane;
- l. 2 β -Methoxymethylcarbamoyl-3 β -(4-fluorophenyl)tropane;
- m. 2 β -Methoxymethylcarbamoyl-3 β -(3,4-dichlorophenyl)tropane;
- n. 2 β -(1-Propanoyl)-3 β -(4-fluorophenyl)tropane;
- o. 2 β -(1-Propanoyl)-3 β -(3,4-dichlorophenyl)tropane;
- p. 2 β -(1-Propanoyl)-3 β -(4-fluorophenyl)tropane;
- q. 2 β -(1-Propanoyl)-3 β -(3,4-dichlorophenyl)tropane;

- r. 2β -(Carboxylic acid)-3 α -(4-fluorophenyl)tropane;
- s. 2β -(Carboxylic acid)-3 α -(3,4-dichlorophenyl)tropane;
- t. 2β -Methoxymethylcarbamoyl-3 α -(4-fluorophenyl)tropane;
- u. 2β -Methoxymethylcarbamoyl-3 α -(3,4-dichlorophenyl)tropane;
- v. 2β -(1-Propanoyl)-3 α -(4-fluorophenyl)-tropane;
- w. 2β -(1-Propanoyl)-3 α -(3,4-dichlorophenyl)tropane;
- x. (1*R*)-N-Methyl-2-hydroxymethyl-3-(4-fluorophenyl)-8-aza-bicyclo[3.2.1]oct-2-ene;
- y. (1*R*)-2-Hydroxymethyl-3-(3,4-dichlorophenyl)-8-azabicyclo[3.2.1]oct-2-ene;
- z. (1*R*)-2-Carbonyl-3-(4-fluorophenyl)-8-azabicyclo[3.2.1]oct-2-ene;
- aa. (1*R*)-2-Carbonyl-3-(3,4-dichlorophenyl)-8-azabicyclo[3.2.1]oct-2-ene;
- bb. (1*R*)-2-(2-Hydroxypropyl)-3-(4-fluorophenyl)-8-azabicyclo[3.2.1]oct-2-ene;
- cc. (1*R*)-2-(2-Hydroxypropyl)-3-(3,4-dichlorophenyl)-8-azabicyclo[3.2.1]oct-2-ene;
- dd. (1*R*)-2-Propanoyl-3-(4-fluorophenyl)-8-norazabicyclo[3.2.1]oct-2-ene;
- ee. (1*R*)-2-Propanoyl-3-(3,4-dichlorophenyl)-8-norazabicyclo[3.2.1]oct-2-ene;
- ff. (1*R*)-2-Methoxycarbonyl-3-(4-fluorophenyl)-8-azabicyclo[3.2.1]oct-2-ene;
- gg. (1*R*)-2-Methoxycarbonyl-3-(3,4-dichlorophenyl)-8-azabicyclo[3.2.1]oct-2-ene;
- hh. (1*R*)-2 β -Methoxycarbonyl-3 α -(3,4-dichlorophenyl)-8-azabicyclo[3.2.1]octane;
- ii. (1*R*)-2 β -Methoxycarbonyl-3 α -(4-fluorophenyl)-8-azabicyclo[3.2.1]octane;
- jj. (1*R*)-2-Methoxycarbonyl-3-(2-naphthyl)-8-azabicyclo[3.2.1]oct-2-ene;
- kk. (1*R*)-2 β -Methoxycarbonyl-3 β -(2-naphthyl)-8-azabicyclo[3.2.1]octane;
- ll. (1*R*)-2 β -Methoxycarbonyl-3 α -(2-naphthyl)-8-azabicyclo[3.2.1]octane;
- mm. (1*R*)-2 β -Methoxycarbonyl-3 β -(2-naphthyl)-8-azabicyclo[3.2.1]octane; and
- nn. (1*R*)-2 β -Methoxycarbonyl-3 α -(2-naphthyl)-8-azabicyclo[3.2.1]octane.

11. A compound according to claim 1 selected from the group consisting of:

- a. N-[2-(3'-N'-Propyl-(1"*R*)-2" β -(1-propanoyl)-3" β -(4-fluorophenyl)tropane)((2-((triphenylmethyl) thio)ethyl)amino)acetyl]-S-(triphenyl)-2-aminoethanethiol;
- b. N-[2-(3'-N'-Propyl-(1"*R*)-2" β -(1-propanoyl)-3" β -(3,4-dichlorophenyl)tropane)((2-((triphenylmethyl) thio)ethyl)amino)acetyl]-S-(triphenyl)-2-aminoethanethiol;
- c. N-[2-(3'-N'-Propyl-(1"*R*)-2" β -(1-propanoyl)-3" β -(2-naphthyl)tropane)((2-((triphenylmethyl) thio)ethyl)amino)acetyl]-S-(triphenyl)-2-aminoethanethiol;
- d. N-[2-(3'-N'-Propyl-(1"*R*)-2" β -(1-propanoyl)-3" α -(4-fluorophenyl)tropane)((2-((triphenylmethyl) thio)ethyl)amino)acetyl]-S-(triphenyl)-2-aminoethanethiol;
- e. N-[2-(3'-N'-Propyl-(1"*R*)-2" β -(1-propanoyl)-3" α -(3,4-dichlorophenyl)tropane)((2-((triphenylmethyl) thio)ethyl)amino)acetyl]-S-(triphenyl)-2-aminoethanethiol;
- f. N-[2-(3'-N'-Propyl-(1"*R*)-2" β -(1-propanoyl)-3" α -(2-naphthyl)tropane)((2-((triphenylmethyl) thio)ethyl)amino)acetyl]-S-(triphenyl)-2-aminoethanethiol;
- g. N-[2-(3'-N'-Propyl-(1"*R*)-2"--(1-propanoyl)-3"--(4-fluorophenyl)trop-2-ene)((2-((triphenylmethyl) thio)ethyl)amino)acetyl]-S-(triphenyl)-2-aminoethanethiol;
- h. N-[2-(3'-N'-Propyl-(1"*R*)-2"--(1-propanoyl)-3"--(3,4-dichlorophenyl)trop-2-ene)((2-((triphenylmethyl) thio)ethyl)amino)acetyl]-S-(triphenyl)-2-aminoethanethiol;
- i. N-[2-(3'-N'-Propyl-(1"*R*)-2"--(1-propanoyl)-3"--(2-naphthyl)trop-2-ene)((2-((triphenylmethyl) thio)ethyl)amino)acetyl]-S-(triphenyl)-2-aminoethanethiol;
- j. N-[2-(3'-N'-Propyl-(1"*R*)-2" β -(methoxycarbonyl)-3" β -(4-fluorophenyl)tropane)((2-((triphenylmethyl) thio)ethyl)amino)acetyl]-S-(triphenyl)-2-aminoethanethiol;
- k. N-[2-(3'-N'-Propyl-(1"*R*)-2" β -(methoxycarbonyl)-3" β -(3,4-dichlorophenyl)tropane)((2-((triphenylmethyl) thio)ethyl)amino)acetyl]-S-

(triphenyl)-2-aminoethanethiol;

1. N-[2-(3'-N'-Propyl-(1"*R*)-2" β -(methoxycarbonyl)-3" β -(2-naphthyl)trop-2-ene)((2-((triphenylmethyl) thio)ethyl)amino)acetyl]-S-(triphenyl)-2-aminoethanethiol;
- m. N-[2-(3'-N'-Propyl-(1"*R*)-2" β -(methoxycarbonyl)-3" α -(4-fluorophenyl)trop-2-ene)((2-((triphenylmethyl) thio)ethyl)amino)acetyl]-S-(triphenyl)-2-aminoethanethiol;
- n. N-[2-(3'-N'-Propyl-(1"*R*)-2" β -(methoxycarbonyl)-3" α -(3,4-dichlorophenyl)trop-2-ene)((2-((triphenylmethyl) thio)ethyl)amino)acetyl]-S-(triphenyl)-2-aminoethanethiol;
- o. N-[2-(3'-N'-Propyl-(1"*R*)-2" β -(methoxycarbonyl)-3" α -(2-naphthyl)trop-2-ene)((2-((triphenylmethyl) thio)ethyl)amino)acetyl]-S-(triphenyl)-2-aminoethanethiol;
- p. N-[2-(3'-N'-Propyl-(1"*R*)-2"--(methoxycarbonyl)-3"--(4-fluorophenyl)trop-2-ene)((2-((triphenylmethyl) thio)ethyl)amino)acetyl]-S-(triphenyl)-2-aminoethanethiol;
- q. N-[2-(3'-N'-Propyl-(1"*R*)-2"--(methoxycarbonyl)-3"--(3,4-dichlorophenyl)trop-2-ene)((2-((triphenylmethyl) thio)ethyl)amino)acetyl]-S-(triphenyl)-2-aminoethanethiol;
- r. N-[2-(3'-N'-Propyl-(1"*R*)-2"--(methoxycarbonyl)-3"--(2-naphthyl)trop-2-ene)((2-((triphenylmethyl) thio)ethyl)amino)acetyl]-S-(triphenyl)-2-aminoethanethiol;
- s. N-[2-(3'-N'-Propyl-(1"*R*)-2" β -(methoxymethylcarbamoyl)-3" β -(4-fluorophenyl)trop-2-ene)((2-((triphenylmethyl) thio)ethyl)amino)acetyl]-S-(triphenyl)-2-aminoethanethiol;
- t. N-[2-(3'-N'-Propyl-(1"*R*)-2" β -(methoxymethylcarbamoyl)-3" β -(3,4-dichlorophenyl)trop-2-ene)((2-((triphenylmethyl) thio)ethyl)amino)acetyl]-S-(triphenyl)-2-aminoethanethiol;

- u. N-[2-(3'-N'-Propyl-(1"*R*)-2"- β -(methoxymethylcarbamoyl)-3" β -(2-naphthyl)tropane)((2-((triphenylmethyl) thio)ethyl)amino)acetyl]-S-(triphenyl)-2-aminoethanethiol;
- v. N-[2-(3'-N'-Propyl-(1"*R*)-2"- β -(methoxymethylcarbamoyl)-3" α -(4-fluorophenyl)tropane)((2-((triphenylmethyl) thio)ethyl)amino)acetyl]-S-(triphenyl)-2-aminoethanethiol;
- w. N-[2-(3'-N'-Propyl-(1"*R*)-2"- β -(methoxymethylcarbamoyl)-3" α -(3,4-dichlorophenyl)tropane)((2-((triphenylmethyl) thio)ethyl)amino)acetyl]-S-(triphenyl)-2-aminoethanethiol;
- x. N-[2-(3'-N'-Propyl-(1"*R*)-2"- β -(methoxymethylcarbamoyl)-3" α -(2-naphthyl)tropane)((2-((triphenylmethyl) thio)ethyl)amino)acetyl]-S-(triphenyl)-2-aminoethanethiol;
- y. N-[2-(3'-N'-Propyl-(1"*R*)-2"--(methoxymethylcarbamoyl)-3"--(4-fluorophenyl)trop-2-ene)((2-((triphenylmethyl) thio)ethyl)amino)acetyl]-S-(triphenyl)-2-aminoethanethiol;
- z. N-[2-(3'-N'-Propyl-(1"*R*)-2"--(methoxymethylcarbamoyl)-3"--(3,4-dichlorophenyl)trop-2-ene)((2-((triphenylmethyl) thio)ethyl)amino)acetyl]-S-(triphenyl)-2-aminoethanethiol;
- aa. N-[2-(3'-N'-Propyl-(1"*R*)-2"--(methoxymethylcarbamoyl)-3"--(2-naphthyl)trop-2-ene)((2-((triphenylmethyl) thio)ethyl)amino)acetyl]-S-(triphenyl)-2-aminoethanethiol;

12. A compound according to claim 2 selected from the group consisting of:

- a. N-[(2-((3'-N'-Propyl-(1"*R*)-2" β -(1-propanoyl)-3" β -(4-fluorophenyl)tropane)(2-mercptoethyl)amino)acetyl)-2-aminoethane-thiolato]rhenium (V) oxide;
- b. N-[(2-((3'-N'-Propyl-(1"*R*)-2" β -(1-propanoyl)-3" β -(3,4-dichlorophenyl)tropane)(2-mercptoethyl)amino)acetyl)-2-aminoethane-thiolato]rhenium (V) oxide;
- c. N-[(2-((3'-N'-Propyl-(1"*R*)-2" β -(1-propanoyl)-3" β -(2-naphthyl)tropane)(2-mercptoethyl)amino)acetyl)-2-aminoethane-thiolato]rhenium (V) oxide;
- d. N-[(2-((3'-N'-Propyl-(1"*R*)-2" β -(1-propanoyl)-3" α -(4-fluorophenyl)tropane)(2-mercptoethyl)amino)acetyl)-2-aminoethane-thiolato]rhenium (V) oxide;
- e. N-[(2-((3'-N'-Propyl-(1"*R*)-2" β -(1-propanoyl)-3" α -(3,4-dichlorophenyl)tropane)(2-mercptoethyl)amino)acetyl)-2-aminoethane-thiolato]rhenium (V) oxide;
- f. N-[(2-((3'-N'-Propyl-(1"*R*)-2" β -(1-propanoyl)-3" α -(2-naphthyl)tropane)(2-mercptoethyl)amino)acetyl)-2-aminoethane-thiolato]rhenium (V) oxide;
- g. N-[(2-((3'-N'-Propyl-(1"*R*)-2"--(1-propanoyl)-3"--(4-fluorophenyl)trop-2-ene)(2-mercptoethyl)amino)acetyl)-2-aminoethane-thiolato]rhenium (V) oxide;
- h. N-[(2-((3'-N'-Propyl-(1"*R*)-2"--(1-propanoyl)-3"--(3,4-dichlorophenyl)trop-2-ene)(2-mercptoethyl)amino)acetyl)-2-aminoethane-thiolato]rhenium (V) oxide;
- i. N-[(2-((3'-N'-Propyl-(1"*R*)-2"--(1-propanoyl)-3"--(2-naphthyl)trop-2-ene)(2-mercptoethyl)amino)acetyl)-2-aminoethane-thiolato]rhenium (V) oxide;
- j. N-[(2-((3'-N'-Propyl-(1"*R*)-2" β -(methoxycarbonyl)-3" β -(4-fluorophenyl)tropane)(2-mercptoethyl)amino)acetyl)-2-aminoethane-thiolato]rhenium (V) oxide;
- k. N-[(2-((3'-N'-Propyl-(1"*R*)-2" β -(methoxycarbonyl)-3" β -(3,4-dichlorophenyl)tropane)(2-mercptoethyl)amino)acetyl)-2-aminoethane-thiolato]rhenium (V) oxide;

1. N-[(2-((3'-N'-Propyl-(1"*R*)-2"-β-(methoxycarbonyl)-3"-β-(2-naphthyl)tropane)(2-mercaptopethyl)amino)acetyl)-2-aminoethane-thiolato]rhenium (V) oxide;
- m. N-[(2-((3'-N'-Propyl-(1"*R*)-2"-β-(methoxycarbonyl)-3"-α-(4-fluorophenyl)tropane)(2-mercaptopethyl)amino)acetyl)-2-aminoethane-thiolato]rhenium (V) oxide;
- n. N-[(2-((3'-N'-Propyl-(1"*R*)-2"-β-(methoxycarbonyl)-3"-α-(3,4-dichlorophenyl)tropane)(2-mercaptopethyl)amino)acetyl)-2-aminoethane-thiolato]rhenium (V) oxide;
- o. N-[(2-((3'-N'-Propyl-(1"*R*)-2"-β-(methoxycarbonyl)-3"-α-(2-naphthyl)tropane)(2-mercaptopethyl)amino)acetyl)-2-aminoethane-thiolato]rhenium (V) oxide;
- p. N-[(2-((3'-N'-Propyl-(1"*R*)-2"--(methoxycarbonyl)-3"--(4-fluorophenyl)trop-2-ene)(2-mercaptopethyl)amino)acetyl)-2-aminoethane-thiolato]rhenium (V) oxide;
- q. N-[(2-((3'-N'-Propyl-(1"*R*)-2"--(methoxycarbonyl)-3"--(3,4-dichlorophenyl)trop-2-ene)(2-mercaptopethyl)amino)acetyl)-2-aminoethane-thiolato]rhenium (V) oxide;
- r. N-[(2-((3'-N'-Propyl-(1"*R*)-2"--(methoxycarbonyl)-3"--(2-naphthyl)trop-2-ene)(2-mercaptopethyl)amino)acetyl)-2-aminoethane-thiolato]rhenium (V) oxide;
- s. N-[(2-((3'-N'-Propyl-(1"*R*)-2"-β-(methoxymethylcarbamoyl)-3"-β-(4-fluorophenyl)tropane)(2-mercaptopethyl)amino)acetyl)-2-aminoethane-thiolato]rhenium (V) oxide;
- t. N-[(2-((3'-N'-Propyl-(1"*R*)-2"-β-(methoxymethylcarbamoyl)-3"-β-(3,4-dichlorophenyl)tropane)(2-mercaptopethyl)amino)acetyl)-2-aminoethane-thiolato]rhenium (V) oxide;
- u. N-[(2-((3'-N'-Propyl-(1"*R*)-2"-β-(methoxymethylcarbamoyl)-3"-β-(2-naphthyl)tropane)(2-mercaptopethyl)amino)acetyl)-2-aminoethane-thiolato]rhenium (V) oxide;

- v. N-[(2-((3'-N'-Propyl-(1"*R*)-2"-β-(methoxymethylcarbamoyl)-3"-α-(4-fluorophenyl)tropane)(2-mercaptoproethyl)amino)acetyl)-2-aminoethane-thiolato]rhenium (V) oxide;
- w. N-[(2-((3'-N'-Propyl-(1"*R*)-2"-β-(methoxymethylcarbamoyl)-3"-α-(3,4-dichlorophenyl)tropane)(2-mercaptoproethyl)amino)acetyl)-2-aminoethane-thiolato]rhenium (V) oxide;
- x. N-[(2-((3'-N'-Propyl-(1"*R*)-2"-β-(methoxymethylcarbamoyl)-3"-α-(2-naphthyl)tropane)(2-mercaptoproethyl)amino)acetyl)-2-aminoethane-thiolato]rhenium (V) oxide;
- y. N-[(2-((3'-N'-Propyl-(1"*R*)-2"--(methoxymethylcarbamoyl)-3"--(4-fluorophenyl)trop-2-ene)(2-mercaptoproethyl)amino)acetyl)-2-aminoethane-thiolato]rhenium (V) oxide;
- z. N-[(2-((3'-N'-Propyl-(1"*R*)-2"--(methoxymethylcarbamoyl)-3"--(3,4-dichlorophenyl)trop-2-ene)(2-mercaptoproethyl)amino)acetyl)-2-aminoethane-thiolato]rhenium (V) oxide;
- aa. N-[(2-((3'-N'-Propyl-(1"*R*)-2"--(methoxymethylcarbamoyl)-3"--(2-naphthyl)trop-2-ene)(2-mercaptoproethyl)amino)acetyl)-2-aminoethane-thiolato]rhenium (V) oxide;
- bb. N-[(2-((3'-N'-Propyl-(1"*R*)-2"-β-(1-propanoyl)-3"-β-(4-fluorophenyl)tropane)(2-mercaptoproethyl)amino)acetyl)-2-aminoethane-thiolato]technetium (V) oxide;
- cc. N-[(2-((3'-N'-Propyl-(1"*R*)-2"-β-(1-propanoyl)-3"-β-(3,4-dichlorophenyl)tropane)(2-mercaptoproethyl)amino)acetyl)-2-aminoethane-thiolato]technetium (V) oxide;
- dd. N-[(2-((3'-N'-Propyl-(1"*R*)-2"-β-(1-propanoyl)-3"-β-(2-naphthyl)tropane)(2-mercaptoproethyl)amino)acetyl)-2-aminoethane-thiolato]technetium (V) oxide;

- ee. N-[(2-((3'-N'-Propyl-(1"*R*)-2" β -(1-propanoyl)-3" α -(4-fluorophenyl)tropane)(2-mercaptopethyl)amino)acetyl]-2-aminoethane-thiolato]technetium (V) oxide;
- ff. N-[(2-((3'-N'-Propyl-(1"*R*)-2" β -(1-propanoyl)-3" α -(3,4-dichlorophenyl)tropane)(2-mercaptopethyl)amino)acetyl]-2-aminoethane-thiolato]technetium (V) oxide;
- gg. N-[(2-((3'-N'-Propyl-(1"*R*)-2" β -(1-propanoyl)-3" α -(2-naphthyl)tropane)(2-mercaptopethyl)amino)acetyl]-2-aminoethane-thiolato]technetium (V) oxide;
- hh. N-[(2-((3'-N'-Propyl-(1"*R*)-2"--(1-propanoyl)-3"--(4-fluorophenyl)trop-2-ene)(2-mercaptopethyl)amino)acetyl]-2-aminoethane-thiolato]technetium (V) oxide;
- ii. N-[(2-((3'-N'-Propyl-(1"*R*)-2"--(1-propanoyl)-3"--(3,4-dichlorophenyl)trop-2-ene)(2-mercaptopethyl)amino)acetyl]-2-aminoethane-thiolato]technetium (V) oxide;
- jj. N-[(2-((3'-N'-Propyl-(1"*R*)-2"--(1-propanoyl)-3"--(2-naphthyl)trop-2-ene)(2-mercaptopethyl)amino)acetyl]-2-aminoethane-thiolato]technetium (V) oxide;
- kk. N-[(2-((3'-N'-Propyl-(1"*R*)-2" β -(methoxycarbonyl)-3" β -(4-fluorophenyl)tropane)(2-mercaptopethyl)amino)acetyl]-2-aminoethane-thiolato]technetium (V) oxide;
- ll. N-[(2-((3'-N'-Propyl-(1"*R*)-2" β -(methoxycarbonyl)-3" β -(3,4-dichlorophenyl)tropane)(2-mercaptopethyl)amino)acetyl]-2-aminoethane-thiolato]technetium (V) oxide;
- mm. N-[(2-((3'-N'-Propyl-(1"*R*)-2" β -(methoxycarbonyl)-3" β -(2-naphthyl)tropane)(2-mercaptopethyl)amino)acetyl]-2-aminoethane-thiolato]technetium (V) oxide;
- nn. N-[(2-((3'-N'-Propyl-(1"*R*)-2" β -(methoxycarbonyl)-3" α -(4-fluorophenyl)tropane)(2-mercaptopethyl)amino)acetyl]-2-aminoethane-thiolato]technetium (V) oxide;
- oo. N-[(2-((3'-N'-Propyl-(1"*R*)-2" β -(methoxycarbonyl)-3" α -(3,4-dichlorophenyl)tropane)(2-mercaptopethyl)amino)acetyl]-2-aminoethane-thiolato]technetium (V) oxide;

pp. N-[(2-((3'-N'-Propyl-(1"*R*)-2" β -(methoxycarbonyl)-3" α -(2-naphthyl)tropane)(2-mercaptopethyl)amino)acetyl]-2-aminoethane-thiolato]technetium (V) oxide;

qq. N-[(2-((3'-N'-Propyl-(1"*R*)-2"--(methoxycarbonyl)-3"--(4-fluorophenyl)trop-2-ene)(2-mercaptopethyl)amino)acetyl]-2-aminoethane-thiolato]technetium (V) oxide;

rr. N-[(2-((3'-N'-Propyl-(1"*R*)-2"--(methoxycarbonyl)-3"--(3,4-dichlorophenyl)trop-2-ene)(2-mercaptopethyl)amino)acetyl]-2-aminoethane-thiolato]technetium (V) oxide;

ss. N-[(2-((3'-N'-Propyl-(1"*R*)-2"--(methoxycarbonyl)-3"--(2-naphthyl)trop-2-ene)(2-mercaptopethyl)amino)acetyl]-2-aminoethane-thiolato]technetium (V) oxide;

tt. N-[(2-((3'-N'-Propyl-(1"*R*)-2" β -(methoxymethylcarbamoyl)-3" β -(4-fluorophenyl)tropane)(2-mercaptopethyl)amino)acetyl]-2-aminoethane-thiolato]technetium (V) oxide;

uu. N-[(2-((3'-N'-Propyl-(1"*R*)-2" β -(methoxymethylcarbamoyl)-3" β -(3,4-dichlorophenyl)tropane)(2-mercaptopethyl)amino)acetyl]-2-aminoethane-thiolato]technetium (V) oxide;

vv. N-[(2-((3'-N'-Propyl-(1"*R*)-2" β -(methoxymethylcarbamoyl)-3" β -(2-naphthyl)tropane)(2-mercaptopethyl)amino)acetyl]-2-aminoethane-thiolato]technetium (V) oxide;

ww. N-[(2-((3'-N'-Propyl-(1"*R*)-2" β -(methoxymethylcarbamoyl)-3" α -(4-fluorophenyl)tropane)(2-mercaptopethyl)amino)acetyl]-2-aminoethane-thiolato]technetium (V) oxide;

xx. N-[(2-((3'-N'-Propyl-(1"*R*)-2" β -(methoxymethylcarbamoyl)-3" α -(3,4-dichlorophenyl)tropane)(2-mercaptoproethyl)amino)acetyl]-2-aminoethane-thiolato]technetium (V) oxide;

yy. N-[(2-((3'-N'-Propyl-(1"*R*)-2" β -(methoxymethylcarbamoyl)-3" α -(2-naphthyl)tropane)(2-mercaptoproethyl)amino)acetyl]-2-aminoethane-thiolato]technetium (V) oxide;

zz. N-[(2-((3'-N'-Propyl-(1"*R*)-2"--(methoxymethylcarbamoyl)-3"--(4-fluorophenyl)trop-2-ene)(2-mercaptoproethyl)amino)acetyl]-2-aminoethane-thiolato]technetium (V) oxide;

aaa. N-[(2-((3'-N'-Propyl-(1"*R*)-2"--(methoxymethylcarbamoyl)-3"--(3,4-dichlorophenyl)trop-2-ene)(2-mercaptoproethyl)amino)acetyl]-2-aminoethane-thiolato]technetium (V) oxide;

bbb. N-[(2-((3'-N'-Propyl-(1"*R*)-2"--(methoxymethylcarbamoyl)-3"--(2-naphthyl)trop-2-ene)(2-mercaptoproethyl)amino)acetyl]-2-aminoethane-thiolato]technetium (V) oxide;

13. A compound according to claim 3 selected from the group consisting of:

a. N-[(2-((3'-N'-Propyl-(1"*R*)-2" β -(1-propanoyl)-3" β -(4-fluorophenyl)tropane)(2-mercaptoproethyl)amino)acetyl]-2-aminoethane-thiolato]technetium (V) oxide;

b. N-[(2-((3'-N'-Propyl-(1"*R*)-2" β -(1-propanoyl)-3" β -(3,4-dichlorophenyl)tropane)(2-mercaptoproethyl)amino)acetyl]-2-aminoethane-thiolato]technetium (V) oxide;

c. N-[(2-((3'-N'-Propyl-(1"*R*)-2" β -(1-propanoyl)-3" β -(2-naphthyl)tropane)(2-mercaptoproethyl)amino)acetyl]-2-aminoethane-thiolato]technetium (V) oxide;

- d. N-[(2-((3'-N'-Propyl-(1"*R*)-2" β -(1-propanoyl)-3" α -(4-fluorophenyl)tropane)(2-mercaptopoethyl)amino)acetyl)-2-aminoethane-thiolato]technetium (V) oxide;
- e. N-[(2-((3'-N'-Propyl-(1"*R*)-2" β -(1-propanoyl)-3" α -(3,4-dichlorophenyl)tropane)(2-mercaptopoethyl)amino)acetyl)-2-aminoethane-thiolato]technetium (V) oxide;
- f. N-[(2-((3'-N'-Propyl-(1"*R*)-2" β -(1-propanoyl)-3" α -(2-naphthyl)tropane)(2-mercaptopoethyl)amino)acetyl)-2-aminoethane-thiolato]technetium (V) oxide;
- g. N-[(2-((3'-N'-Propyl-(1"*R*)-2"--(1-propanoyl)-3"--(4-fluorophenyl)trop-2-ene)(2-mercaptopoethyl)amino)acetyl)-2-aminoethane-thiolato]technetium (V) oxide;
- h. N-[(2-((3'-N'-Propyl-(1"*R*)-2"--(1-propanoyl)-3"--(3,4-dichlorophenyl)trop-2-ene)(2-mercaptopoethyl)amino)acetyl)-2-aminoethane-thiolato]technetium (V) oxide;
- i. N-[(2-((3'-N'-Propyl-(1"*R*)-2"--(1-propanoyl)-3"--(2-naphthyl)trop-2-ene)(2-mercaptopoethyl)amino)acetyl)-2-aminoethane-thiolato]technetium (V) oxide;
- j. N-[(2-((3'-N'-Propyl-(1"*R*)-2" β -(methoxycarbonyl)-3" β -(4-fluorophenyl)tropane)(2-mercaptopoethyl)amino)acetyl)-2-aminoethane-thiolato]technetium (V) oxide;
- k. N-[(2-((3'-N'-Propyl-(1"*R*)-2" β -(methoxycarbonyl)-3" β -(3,4-dichlorophenyl)tropane)(2-mercaptopoethyl)amino)acetyl)-2-aminoethane-thiolato]technetium (V) oxide;
- l. N-[(2-((3'-N'-Propyl-(1"*R*)-2" β -(methoxycarbonyl)-3" β -(2-naphthyl)tropane)(2-mercaptopoethyl)amino)acetyl)-2-aminoethane-thiolato]technetium (V) oxide;
- m. N-[(2-((3'-N'-Propyl-(1"*R*)-2" β -(methoxycarbonyl)-3" α -(4-fluorophenyl)tropane)(2-mercaptopoethyl)amino)acetyl)-2-aminoethane-thiolato]technetium (V) oxide;
- n. N-[(2-((3'-N'-Propyl-(1"*R*)-2" β -(methoxycarbonyl)-3" α -(3,4-dichlorophenyl)tropane)(2-mercaptopoethyl)amino)acetyl)-2-aminoethane-thiolato]technetium (V) oxide;

- o. N-[(2-((3'-N'-Propyl-(1"*R*)-2"- β -(methoxycarbonyl)-3" α -(2-naphthyl)tropane)(2-mercaptopoethyl)amino)acetyl)-2-aminoethane-thiolato]technetium (V) oxide;
- p. N-[(2-((3'-N'-Propyl-(1"*R*)-2"--(methoxycarbonyl)-3"--(4-fluorophenyl)trop-2-ene)(2-mercaptopoethyl)amino)acetyl)-2-aminoethane-thiolato]technetium (V) oxide;
- q. N-[(2-((3'-N'-Propyl-(1"*R*)-2"--(methoxycarbonyl)-3"--(3,4-dichlorophenyl)trop-2-ene)(2-mercaptopoethyl)amino)acetyl)-2-aminoethane-thiolato]technetium (V) oxide;
- r. N-[(2-((3'-N'-Propyl-(1"*R*)-2"--(methoxycarbonyl)-3"--(2-naphthyl)trop-2-ene)(2-mercaptopoethyl)amino)acetyl)-2-aminoethane-thiolato]technetium (V) oxide;
- s. N-[(2-((3'-N'-Propyl-(1"*R*)-2" β -(methoxymethylcarbamoyl)-3" β -(4-fluorophenyl)tropane)(2-mercaptopoethyl)amino)acetyl)-2-aminoethane-thiolato]technetium (V) oxide;
- t. N-[(2-((3'-N'-Propyl-(1"*R*)-2" β -(methoxymethylcarbamoyl)-3" β -(3,4-dichlorophenyl)tropane)(2-mercaptopoethyl)amino)acetyl)-2-aminoethane-thiolato]technetium (V) oxide;
- u. N-[(2-((3'-N'-Propyl-(1"*R*)-2" β -(methoxymethylcarbamoyl)-3" β -(2-naphthyl)tropane)(2-mercaptopoethyl)amino)acetyl)-2-aminoethane-thiolato]technetium (V) oxide;
- v. N-[(2-((3'-N'-Propyl-(1"*R*)-2" β -(methoxymethylcarbamoyl)-3" α -(4-fluorophenyl)tropane)(2-mercaptopoethyl)amino)acetyl)-2-aminoethane-thiolato]technetium (V) oxide;
- w. N-[(2-((3'-N'-Propyl-(1"*R*)-2" β -(methoxymethylcarbamoyl)-3" α -(3,4-dichlorophenyl)tropane)(2-mercaptopoethyl)amino)acetyl)-2-aminoethane-thiolato]technetium (V) oxide;

- x. N-[(2-((3'-N'-Propyl-(1"R)-2"β-(methoxymethylcarbamoyl)-3"α-(2-naphthyl)tropane)(2-mercaptoproethyl)amino)acetyl)-2-aminoethane-thiolato]technetium (V) oxide;
- y. N-[(2-((3'-N'-Propyl-(1"R)-2"-(methoxymethylcarbamoyl)-3"- (4-fluorophenyl)trop-2-ene)(2-mercaptoproethyl)amino)acetyl)-2-aminoethane-thiolato]technetium (V) oxide;
- z. N-[(2-((3'-N'-Propyl-(1"R)-2"-(methoxymethylcarbamoyl)-3"- (3,4-dichlorophenyl)trop-2-ene)(2-mercaptoproethyl)amino)acetyl)-2-aminoethane-thiolato]technetium (V) oxide; and
- aa. N-[(2-((3'-N'-Propyl-(1"R)-2"-(methoxymethylcarbamoyl)-3"- (2-naphthyl)trop-2-ene)(2-mercaptoproethyl)amino)acetyl)-2-aminoethane-thiolato]technetium (V) oxide.

14. A compound according to claim 4 selected from the group consisting of:

- a. N-[(2-((3'-N'-Propyl-(1"R)-2"β-(1-propanoyl)-3"β-(4-fluorophenyl)tropane)(2-mercaptoproethyl)amino)acetyl)-2-aminoethane-thiolato]rhenium (V) oxide;
- b. N-[(2-((3'-N'-Propyl-(1"R)-2"β-(1-propanoyl)-3"β-(3,4-dichlorophenyl)tropane)(2-mercaptoproethyl)amino)acetyl)-2-aminoethane-thiolato]rhenium (V) oxide;
- c. N-[(2-((3'-N'-Propyl-(1"R)-2"β-(1-propanoyl)-3"β-(2-naphthyl)tropane)(2-mercaptoproethyl)amino)acetyl)-2-aminoethane-thiolato]rhenium (V) oxide;
- d. N-[(2-((3'-N'-Propyl-(1"R)-2"β-(1-propanoyl)-3"α-(4-fluorophenyl)tropane)(2-mercaptoproethyl)amino)acetyl)-2-aminoethane-thiolato]rhenium (V) oxide;
- e. N-[(2-((3'-N'-Propyl-(1"R)-2"β-(1-propanoyl)-3"α-(3,4-dichlorophenyl)tropane)(2-mercaptoproethyl)amino)acetyl)-2-aminoethane-thiolato]rhenium (V) oxide;

- f. N-[(2-((3'-N'-Propyl-(1"*R*)-2"- β -(1-propanoyl)-3"- α -(2-naphthyl)trop-2-ene)(2-mercaptoproethyl)amino)acetyl)-2-aminoethane-thiolato]rhenium (V) oxide;
- g. N-[(2-((3'-N'-Propyl-(1"*R*)-2"--(1-propanoyl)-3"--(4-fluorophenyl)trop-2-ene)(2-mercaptoproethyl)amino)acetyl)-2-aminoethane-thiolato]rhenium (V) oxide;
- h. N-[(2-((3'-N'-Propyl-(1"*R*)-2"--(1-propanoyl)-3"--(3,4-dichlorophenyl)trop-2-ene)(2-mercaptoproethyl)amino)acetyl)-2-aminoethane-thiolato]rhenium (V) oxide;
- i. N-[(2-((3'-N'-Propyl-(1"*R*)-2"--(1-propanoyl)-3"--(2-naphthyl)trop-2-ene)(2-mercaptoproethyl)amino)acetyl)-2-aminoethane-thiolato]rhenium (V) oxide;
- j. N-[(2-((3'-N'-Propyl-(1"*R*)-2"- β -(methoxycarbonyl)-3"- β -(4-fluorophenyl)trop-2-ene)(2-mercaptoproethyl)amino)acetyl)-2-aminoethane-thiolato]rhenium (V) oxide;
- k. N-[(2-((3'-N'-Propyl-(1"*R*)-2"- β -(methoxycarbonyl)-3"- β -(3,4-dichlorophenyl)trop-2-ene)(2-mercaptoproethyl)amino)acetyl)-2-aminoethane-thiolato]rhenium (V) oxide;
- l. N-[(2-((3'-N'-Propyl-(1"*R*)-2"- β -(methoxycarbonyl)-3"- β -(2-naphthyl)trop-2-ene)(2-mercaptoproethyl)amino)acetyl)-2-aminoethane-thiolato]rhenium (V) oxide;
- m. N-[(2-((3'-N'-Propyl-(1"*R*)-2"- β -(methoxycarbonyl)-3"- α -(4-fluorophenyl)trop-2-ene)(2-mercaptoproethyl)amino)acetyl)-2-aminoethane-thiolato]rhenium (V) oxide;
- n. N-[(2-((3'-N'-Propyl-(1"*R*)-2"- β -(methoxycarbonyl)-3"- α -(3,4-dichlorophenyl)trop-2-ene)(2-mercaptoproethyl)amino)acetyl)-2-aminoethane-thiolato]rhenium (V) oxide;
- o. N-[(2-((3'-N'-Propyl-(1"*R*)-2"- β -(methoxycarbonyl)-3"- α -(2-naphthyl)trop-2-ene)(2-mercaptoproethyl)amino)acetyl)-2-aminoethane-thiolato]rhenium (V) oxide;
- p. N-[(2-((3'-N'-Propyl-(1"*R*)-2"--(methoxycarbonyl)-3"--(4-fluorophenyl)trop-2-ene)(2-mercaptoproethyl)amino)acetyl)-2-aminoethane-thiolato]rhenium (V) oxide;

- q. N-[(2-((3'-N'-Propyl-(1"*R*)-2"--(methoxycarbonyl)-3"--(3,4-dichlorophenyl)trop-2-ene)(2-mercptoethyl)amino)acetyl)-2-aminoethane-thiolato]rhenium (V) oxide;
- r. N-[(2-((3'-N'-Propyl-(1"*R*)-2"--(methoxycarbonyl)-3"--(2-naphthyl)trop-2-ene)(2-mercptoethyl)amino)acetyl)-2-aminoethane-thiolato]rhenium (V) oxide;
- s. N-[(2-((3'-N'-Propyl-(1"*R*)-2" β -(methoxymethylcarbamoyl)-3" β -(4-fluorophenyl)tropane)(2-mercptoethyl)amino)acetyl)-2-aminoethane-thiolato]rhenium (V) oxide;
- t. N-[(2-((3'-N'-Propyl-(1"*R*)-2" β -(methoxymethylcarbamoyl)-3" β -(3,4-dichlorophenyl)tropane)(2-mercptoethyl)amino)acetyl)-2-aminoethane-thiolato]rhenium (V) oxide;
- u. N-[(2-((3'-N'-Propyl-(1"*R*)-2" β -(methoxymethylcarbamoyl)-3" β -(2-naphthyl)tropane)(2-mercptoethyl)amino)acetyl)-2-aminoethane-thiolato]rhenium (V) oxide;
- v. N-[(2-((3'-N'-Propyl-(1"*R*)-2" β -(methoxymethylcarbamoyl)-3" α -(4-fluorophenyl)tropane)(2-mercptoethyl)amino)acetyl)-2-aminoethane-thiolato]rhenium (V) oxide;
- w. N-[(2-((3'-N'-Propyl-(1"*R*)-2" β -(methoxymethylcarbamoyl)-3" α -(3,4-dichlorophenyl)tropane)(2-mercptoethyl)amino)acetyl)-2-aminoethane-thiolato]rhenium (V) oxide;
- x. N-[(2-((3'-N'-Propyl-(1"*R*)-2" β -(methoxymethylcarbamoyl)-3" α -(2-naphthyl)tropane)(2-mercptoethyl)amino)acetyl)-2-aminoethane-thiolato]rhenium (V) oxide;
- y. N-[(2-((3'-N'-Propyl-(1"*R*)-2"--(methoxymethylcarbamoyl)-3"--(4-fluorophenyl)trop-2-ene)(2-mercptoethyl)amino)acetyl)-2-aminoethane-thiolato]rhenium (V) oxide;

z. N-[(2-((3'-N'-Propyl-(1"*R*)-2"--(methoxymethylcarbamoyl)-3"--(3,4-dichlorophenyl)trop-2-ene)(2-mercptoethyl)amino)acetyl]-2-aminoethane-thiolato]rhenium (V) oxide;

aa. N-[(2-((3'-N'-Propyl-(1"*R*)-2"--(methoxymethylcarbamoyl)-3"--(2-naphthyl)trop-2-ene)(2-mercptoethyl)amino)acetyl]-2-aminoethane-thiolato]rhenium (V) oxide;

15. A compound according to claim 5 selected from the group consisting of:

- a. N-[2-(3'-N'-Propyl-(1"*R*)-2" β -(1-propanoyl)-3" α -(4-fluorophenyl)tropane)((2-((triphenylmethyl) thio)ethyl)amino)acetyl]-S-(triphenyl)-2-aminoethanethiol;
- b. N-[2-(3'-N'-Propyl-(1"*R*)-2" β -(1-propanoyl)-3" α -(3,4-dichlorophenyl)tropane)((2-((triphenylmethyl) thio)ethyl)amino)acetyl]-S-(triphenyl)-2-aminoethanethiol;
- c. N-[2-(3'-N'-Propyl-(1"*R*)-2" β -(1-propanoyl)-3" α -(2-naphthyl)tropane)((2-((triphenylmethyl) thio)ethyl)amino)acetyl]-S-(triphenyl)-2-aminoethanethiol;
- d. N-[2-(3'-N'-Propyl-(1"*R*)-2" β -(methoxycarbonyl)-3" α -(4-fluorophenyl)tropane)((2-((triphenylmethyl) thio)ethyl)amino)acetyl]-S-(triphenyl)-2-aminoethanethiol;
- e. N-[2-(3'-N'-Propyl-(1"*R*)-2" β -(methoxycarbonyl)-3" α -(3,4-dichlorophenyl)tropane)((2-((triphenylmethyl) thio)ethyl)amino)acetyl]-S-(triphenyl)-2-aminoethanethiol;
- f. N-[2-(3'-N'-Propyl-(1"*R*)-2" β -(methoxycarbonyl)-3" α -(2-naphthyl)tropane)((2-((triphenylmethyl) thio)ethyl)amino)acetyl]-S-(triphenyl)-2-aminoethanethiol;
- g. N-[2-(3'-N'-Propyl-(1"*R*)-2" β -(methoxymethylcarbamoyl)-3" α -(4-fluorophenyl)tropane)((2-((triphenylmethyl) thio)ethyl)amino)acetyl]-S-(triphenyl)-2-aminoethanethiol;

- h. N-[2-(3'-N'-Propyl-(1"*R*)-2"β-(methoxymethylcarbamoyl)-3"α-(3,4-dichlorophenyl)tropane)((2-((triphenylmethyl) thio)ethyl)amino)acetyl]-S-(triphenyl)-2-aminoethanethiol; and
- i. N-[2-(3'-N'-Propyl-(1"*R*)-2"β-(methoxymethylcarbamoyl)-3"α-(2-naphthyl)tropane)((2-((triphenylmethyl) thio)ethyl)amino)acetyl]-S-(triphenyl)-2-aminoethanethiol.

16. A compound according to claim 6 selected from the group consisting of:

- a. N-[2-(3'-N'-Propyl-(1"*R*)-2"β-(1-propanoyl)-3"β-(4-fluorophenyl)tropane)((2-((triphenylmethyl) thio)ethyl)amino)acetyl]-S-(triphenyl)-2-aminoethanethiol;
- b. N-[2-(3'-N'-Propyl-(1"*R*)-2"β-(1-propanoyl)-3"β-(3,4-dichlorophenyl)tropane)((2-((triphenylmethyl) thio)ethyl)amino)acetyl]-S-(triphenyl)-2-aminoethanethiol;
- c. N-[2-(3'-N'-Propyl-(1"*R*)-2"β-(1-propanoyl)-3"β-(2-naphthyl)tropane)((2-((triphenylmethyl) thio)ethyl)amino)acetyl]-S-(triphenyl)-2-aminoethanethiol;
- d. N-[2-(3'-N'-Propyl-(1"*R*)-2"β-(methoxycarbonyl)-3"β-(4-fluorophenyl)tropane)((2-((triphenylmethyl) thio)ethyl)amino)acetyl]-S-(triphenyl)-2-aminoethanethiol;
- e. N-[2-(3'-N'-Propyl-(1"*R*)-2"β-(methoxycarbonyl)-3"β-(3,4-dichlorophenyl)tropane)((2-((triphenylmethyl) thio)ethyl)amino)acetyl]-S-(triphenyl)-2-aminoethanethiol;
- f. N-[2-(3'-N'-Propyl-(1"*R*)-2"β-(methoxycarbonyl)-3"β-(2-naphthyl)tropane)((2-((triphenylmethyl) thio)ethyl)amino)acetyl]-S-(triphenyl)-2-aminoethanethiol;
- g. N-[2-(3'-N'-Propyl-(1"*R*)-2"β-(methoxymethylcarbamoyl)-3"β-(4-fluorophenyl)tropane)((2-((triphenylmethyl) thio)ethyl)amino)acetyl]-S-(triphenyl)-2-aminoethanethiol;

- h. N-[2-(3'-N'-Propyl-(1"*R*)-2"- β -(methoxymethylcarbamoyl)-3"- β -(3,4-dichlorophenyl)tropane)((2-((triphenylmethyl) thio)ethyl)amino)acetyl]-S-(triphenyl)-2-aminoethanethiol; and
- i. N-[2-(3'-N'-Propyl-(1"*R*)-2"- β -(methoxymethylcarbamoyl)-3"- β -(2-naphthyl)tropane)((2-((triphenylmethyl) thio)ethyl)amino)acetyl]-S-(triphenyl)-2-aminoethanethiol.

17. The compound of claim 1, selected from the group consisting of:

- a. N-[2-(3'-N'-Propyl-(1"*R*)-2"--(1-propanoyl)-3"--(4-fluorophenyl)tro-2-ene)((2-((triphenylmethyl) thio)ethyl)amino)acetyl]-S-(triphenyl)-2-aminoethanethiol;
- b. N-[2-(3'-N'-Propyl-(1"*R*)-2"--(1-propanoyl)-3"--(3,4-dichlorophenyl)tro-2-ene)((2-((triphenylmethyl) thio)ethyl)amino)acetyl]-S-(triphenyl)-2-aminoethanethiol;
- c. N-[2-(3'-N'-Propyl-(1"*R*)-2"--(1-propanoyl)-3"--(2-naphthyl)tro-2-ene)((2-((triphenylmethyl) thio)ethyl)amino)acetyl]-S-(triphenyl)-2-aminoethanethiol;
- d. N-[2-(3'-N'-Propyl-(1"*R*)-2"--(methoxycarbonyl)-3"--(4-fluorophenyl)tro-2-ene)((2-((triphenylmethyl) thio)ethyl)amino)acetyl]-S-(triphenyl)-2-aminoethanethiol;
- e. N-[2-(3'-N'-Propyl-(1"*R*)-2"--(methoxycarbonyl)-3"--(3,4-dichlorophenyl)tro-2-ene)((2-((triphenylmethyl) thio)ethyl)amino)acetyl]-S-(triphenyl)-2-aminoethanethiol;
- f. N-[2-(3'-N'-Propyl-(1"*R*)-2"--(methoxycarbonyl)-3"--(2-naphthyl)tro-2-ene)((2-((triphenylmethyl) thio)ethyl)amino)acetyl]-S-(triphenyl)-2-aminoethanethiol;
- g. N-[2-(3'-N'-Propyl-(1"*R*)-2"--(methoxymethylcarbamoyl)-3"--(4-fluorophenyl)tro-2-ene)((2-((triphenylmethyl) thio)ethyl)amino)acetyl]-S-(triphenyl)-2-aminoethanethiol;

- h. N-[2-(3'-N'-Propyl-(1"*R*)-2''-(methoxymethylcarbamoyl)-3''-(3,4-dichlorophenyl)trop-2-ene)((2-((triphenylmethyl) thio)ethyl)amino)acetyl]-S-(triphenyl)-2-aminoethanethiol; and
- i. N-[2-(3'-N'-Propyl-(1"*R*)-2''-(methoxymethylcarbamoyl)-3''-(2-naphthyl)trop-2-ene)((2-((triphenylmethyl) thio)ethyl)amino)acetyl]-S-(triphenyl)-2-aminoethanethiol.

18. A method for detecting the density of tropane recognition sites in a mammal as an indication of neurodegenerative or neuropsychiatric disorders characterized by changes in the density of dopamine transporters or dopamine neurons, said method comprising providing in a suitable pharmacological carrier a radiopharmaceutical compound according to claim 1 labeled with ^{99m}Tc , injecting the compound into the mammal and scanning the mammal using a radiodiagnostic imaging apparatus.

19. A method for monitoring in a mammal neurodegenerative or neuropsychiatric disorders characterized by changes in the density of dopamine transporters or dopamine neurons, said method comprising providing in a suitable pharmacological carrier a radiopharmaceutical compound according to claim 1 labeled with ^{99m}Tc , injecting the compound into the mammal and scanning the mammal using a radiodiagnostic imaging apparatus.

20. A radiopharmaceutical kit for preparing a radiopharmaceutical preparation, said kit comprising a sealed, sterile, apyrogenic vial containing a radiopharmaceutical compound of claim 1 and a reducing agent for labeling said compound with a radionuclide.

21. The radiopharmaceutical kit according to claim 20, wherein the reducing agent is a stannous compound.